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# *Update of Barge and Towboat Operating Costs 2004*

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***Update of Barge & Towboat Operating Costs***

*Economic and Environmental Conference - Baltimore, MD April 13-15, 2004*

## Background

- Corps of Engineers Headquarters has issued shallow draft operating cost guidance 12 times since 1979. The last offical update was issued in April 2002and is available at the Corps of Engineers Website:

http://www.usace.army.mil/inet/functions/cw/cecwp/cecwp_temp/egm051.pdf

(continued)

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## Purpose of Guidance

- **Guidance provides cost information for vessels operating on the Inland Waterway System, including the Mississippi river and its tributaries – Ohio, Illinois, Monongahela, Kanawha and the gulf Intracoastal Waterway**

- **Vessel operating costs are used by the Corps of Engineers Districts in determining economic benefits associated with waterways improvements**

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## Items Not Included in the Barge and Towboat (Shallow Draft) Vessel Operating Costs Economic Guidance

- **Information on Ocean Going Barges**
- **Information on operating costs for vessels that operate in other area, such as the Great Lakes and the Columbia River**

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# Who Uses the Cost Information?

- Primary Customer - Corps District Offices
- Other Federal Agencies - Dept. of Transportation, Tennessee Valley Authority
- Reebie Associates - uses the cost information as an input to their Barge Costing Model
- Private Sector, consulting firms

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**For the 2004 update USACE established the following key objectives for the study:**

- **Identify and interview inland waterways transportation firms, as well as other firms, agencies, organizations or entities that may have information on the construction and operation costs of vessels operating on the inland waterways**

- **Verify the vessel categories addressed in previous Planning Guidance documentation**

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- **Estimate towboat and barge operating costs based on the information collected from interviews**
- **Estimate towboat and barge construction or replacement costs based on the information collected from interviews**
- **Research the existence of shallow draft vessel operating cost models and provide recommendations**

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Initial Literature review: A review of industry literature has not provided evidence that would necessitate the reclassification of towboat and barge categories.

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# Survey Sample and data collection:

**Not random- Compiled from a list of firms involved in inland navigation and chosen based on location, type of operation and fleet size, previous participation in COE survey**

**Geographic regions included:**

**Ohio River; Upper Mississippi and Illinois Rivers; Middle and Lower Mississippi; Tennessee and Cumberland Rivers; Black Warrior and Tombigbee Waterways and the Gulf Intracoastal Waterway (GIWW)**

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Survey Sample:

61 firms were identified as the first option list for interviews and included towboat and barge operators, shipyards and repair facilities

An additional 32 firms were identified as alternates

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- New Survey instrument used

  Previously OMB approved inland vessel survey

  instrument focused more on information used for

  project analysis.

  New survey is a compilation of 2 other surveys to specifically address operating costs – OMB approved in July/Aug ‘03

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# What Information Is Presented?

Towboats - Cost information is presented for 13 sizes of towboats, ranging from 400-600 horsepower (hp) up to 10,000 hp

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# What Information is provided in the economic Guidance

- Towboats
  - Replacement Costs
  - Total Operating Costs
  - Crew Related Costs (such as wages, fringe benefits, food, transportation)

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- Towboats

  - Boat Related costs (such as maintenance and repair, supplies, insurance, other)
  - Administrative costs
  - Fuel consumption and fuel costs

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# What Information Is Presented?

- Barges - Cost Information is presented for 27 different types of barges across 8 classes of barges. These include: open hopper, covers hopper, deck, self-loading, tank, pressurized tank, steel tank, and chemical tank

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# What Information is provided in the economic Guidance

- Barges
  - Replacement Costs
  - Operating Costs
  - Administrative costs
  - Port costs

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# Barge Replacement Costs

- Replacement costs are based on formulas developed during the 1997 update of corps guidance which incorporate the amount/cost of labor hours and the amount/cost of steel required to construct a vessel

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- ***Replacement cost converted to daily cost over 20 year horizon at the current Federal discount rate and 350 operating days***

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# Changes since FY00 Guidance

- Vessel categories and sizes remained the same
- Towboat replacement cost categories remained the same ( two categories: 500-horsepower to 10,000 hp and greater than 10,000 hp)
- Towboat replacement costs generally lower by about 3 percent
- Barge replacement cost increased from 2 to 9 percent depending on the type of barge

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- Barge replacement cost increased from 2 to 9 percent depending on the type of barge
- Vessel replacement cost affected by the cost of labor and steel inputs
- Labor inputs in shipbuilding increased from an average of $11.38 in FY00 to an average of $13.48
- The price of steel plate decreased from $485 per ton in the FY00 guidance to $400 a ton.

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- Daily operating costs for towboats increased from the FY00 Guidance – according to horsepower (from about 1 percent to 6 percent)
- Daily operating costs for barges decreased ranging from a 6.1 percent decrease for open hopper barges to a .38 decrease for tank barge vessels

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- Next steps
- IWR and HQ team with review draft and send copies out to the field review team
- A summarized copy of the report will be made available on line
- Shallow Draft Operating costs will be posted on the HQ web sometime in June (we hope!)

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# Thank you for your time

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